

PRODUCT SHEET  
CA VM:Sort

# CA VM:Sort™



CA VM:Sort™ is an efficient and easy-to-use sort utility for the z/VM environment. It helps simplify application processing, reduces the potential for errors and enhances productivity by providing the ability to convert, select, sort and merge data in a single operation.

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## Overview

CA VM:Sort is a robust, flexible and easy-to-use sort and merge utility for the z/VM environment, that quickly rearranges data in a user-specified sequence. In a single operation users can convert, select, sort and merge data from multiple sources. CA VM:Sort supports z/VSE and z/OS sort control statements and allows user exits to facilitate migration of applications from those environments to z/VM.

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## Business value

CA VM:Sort is designed to increase productivity and save time by sorting or merging data from up to 16 file sources. It provides the flexibility to quickly structure and sequence data to address specific user needs and reporting requirements. Control statements can improve sort performance by allowing the modification, inclusion or exclusion of data.

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## Improves productivity and saves time

A sort utility needs to be efficient and easy to use, accepting input from a variety of sources and offering users more than just a simple sorting utility. Pre-processing data in order for it to effectively address application requirements can often take multiple steps, especially if the file is from a different environment, or just a subset of the data is required. The ability to convert, select, sort and merge data in a single operation simplifies application processing, reduces the potential for errors and improves productivity.

CA VM:Sort is a sort and merge utility that quickly rearranges data in a user-specified sequence. Designed specifically for the z/VM environment, CA VM:Sort allows input or output data to reside on any device supported by CMS. It supports both fixed and variable length record formats. Additionally, CA VM:Sort control statements can improve sort performance by allowing the modification, inclusion or exclusion of data. CA VM:Sort has the flexibility to allow users to convert, select, sort and merge data in a single operation from up to 16 input files from a variety of input media and output the result to a variety of media.

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## Features

### Mainframe 2.0

As part of Mainframe 2.0 strategy, CA Technologies has implemented features that will enable your staff to install, deploy, and service your z/VM products from CA Technologies more effectively and quickly.

- **CA Mainframe VM Product Manager** provides a comprehensive suite of tools that automate the deployment of z/VM products from CA Technologies.
  - Deployment of CA VM:Sort is simplified. Each release can be installed and maintained in a single library, and the single set of product code can be deployed to create multiple executable instances of CA VM:Sort on the same system.
- **Standard implementation of IBM VMSES/E** (Virtual Machine Serviceability Enhancements Staged/Extended) provides numerous benefits to CA VM:Sort users.
  - Industry standard procedures are now used to install and service CA VM:Sort and other z/VM products from CA Technologies, providing a consistent look and feel and increased productivity.

- Skills already developed to service z/VM itself can be leveraged to service CA VM:Sort, so the procedures and commands will be familiar.
- Installation of PTFs is greatly simplified, including the automated inclusion of all necessary prerequisites, providing significant time savings.

## Key capabilities

### ▪ Improved productivity

- **Reformat for selected fields:** The input/output record reformatting capability of CA VM:Sort allows users to reformat output to include only selected fields. This enables users to delete information that is not needed for reports while also reducing work file and output file disk space requirements. This capability, along with record selection, improves sort performance by reducing the volume of data that CA VM:Sort must process and store.

Through the use of user exits, users can reformat records to add additional data or to change data in current fields. This allows users to add information for reporting purposes that is either not available, or is in a format that is not appropriate for their purposes. This also saves time by allowing the work to be done during the sort operation instead of as a separate step before or after the sort.

- **Select specific records:** CA VM:Sort saves time through its ability to select certain records for sorting and output based on selection criteria that identifies data in the record. CA VM:Sort inspects the records during processing and includes only the selected records in the sort processing and output.
- **Retain sequence during sort:** CA VM:Sort allows the user to preserve the original sequence of records of equal sort key assignments. This allows users to provide pre-sorted or merged input and know the original record order for equal sort key items is maintained.
- **Use multiple input files and support a variety of media:** CA VM:Sort allows users to sort or merge data from up to 16 disk, tape and reader input files. Also, it optionally appends sort output to existing files when merging is not desired, and it can write the output to disk, tape, virtual print or virtual punch.
- **Eliminate statement re-entry:** CA VM:Sort eliminates the need for constant re-entry of sort control statements by allowing them to be kept in a control file for repeated use. Comments can be added with the control statements to explain history or reasons for modifying them.

- **Flexibility and ease of use**

- **Easily invoked:** CA VM:Sort can be used as an interactive command line sort utility for on-demand sorting requirements in the z/VM environment. In addition, it can also be called through scheduled production program applications. CA VM:Sort can be called from applications written in languages such as CMS PIPELINES, REXX, COBOL, PL/I, Assembler, EXEC2, FORTRAN, CA Easytrieve®, SAS, FOCUS and others.
- **Reduce training requirements:** CA VM:Sort reduces training requirements by automatically converting CMS SORT utility specifications to CA VM:Sort format so that users currently using CMS SORT do not have to learn a new sort command format.
- **Data summarization:** CA VM:Sort eliminates the need for user-exit summarization by summarizing numeric fields of records containing equal sort keys. All equal sort keyed records can be summarized into one record for output after sort processing.
- **User exits for record modification:** CA VM:Sort supports multiple user exits to facilitate record modification. The ability to code user exits in REXX means users can code their own exits in a language that is easy to understand without the need for an Assembler programmer. CA VM:Sort supports user exit calls at several points during processing for record modification and customization. Through the user exits, records can be changed, added, or deleted before sorting. CA VM:Sort user exits can also be used to analyze or summarize sorted records and to write reports.
- **Automatic dynamic allocation of work space:** CA VM:Sort can dynamically allocate temporary disk (TDISK) work space when sorting a file too large for memory. This reduces the risk of insufficient work space for a sort job and also eliminates the requirement for permanent CMS disk space when sorting large files. CA VM:Sort can direct its temporary work files to permanent CMS disk space and tape as well as TDISK for further flexibility.

In addition, CA VM:Sort prevents abends of sort jobs by issuing a message when insufficient space is available for the sort or for the storage of the sort output. At the beginning of the job, CA VM:Sort estimates the virtual and disk storage requirements based on the sort specifications. If CA VM:Sort determines that there is not enough storage available for sorting or the output, it issues a message indicating the estimated storage requirements so users can increase virtual storage, increase disk space or request additional system TDISK space.

- **Online help:** CA VM:Sort includes an online HELP facility to assist users with the construction of control statements and statement syntax.

- **Compatibility**

- **Compatible with z/OS and z/VSE sort control statements:** CA VM:Sort eliminates the need to convert most existing z/OS or z/VSE sort control statements when migrating to the z/VM environment. Sort control statements are accepted by CA VM:Sort without modification. Additionally, CA VM:Sort can merge z/OS simulated files that are blocked.
- **Standard application parameter list and user exit support:** CA VM:Sort supports standard parameter lists and language user exit calls, facilitating easier migration of applications from z/OS or z/VSE.
- **Maximize value of CA VM:Sort:** CA VM:Sort can be used whenever a sort utility is called in the z/VM environment. Moreover, CA VM:Account™ and other CA VM:Manager Suite for Linux on System z products use CA VM:Sort for sorting as needed.

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## Delivery approach

CA Services provides a portfolio of mainframe services delivered through CA Technologies internal staff and a network of established partners chosen to help you achieve a successful deployment and get the desired business results as quickly as possible. Our standard service offerings are designed to speed deployment and accelerate the learning curve for your staff. CA Technologies field-proven best practices and training help you lower risk, improve use/adoption and ultimately align the product configuration to your business requirements.

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## Benefits

CA VM:Sort is a highly efficient and easy to use sort/merge utility specifically designed for the z/VM environment. By providing the ability to include or exclude specific fields, CA VM:Sort improves the productivity of users, speeds the sort process and reduces resource requirements. By enabling users to convert, select, sort and merge data in a single operation from up to 16 input files from a variety of input media and output the result to a variety of media, CA VM:Sort provides significant flexibility to its users.

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## The CA Technologies advantage

CA VM:Sort is designed to increase productivity and save time by sorting or merging data from multiple sources. It is part of the CA VM:Manager Suite for Linux on System z—a comprehensive portfolio of products that provide automated operations, service level management, security, backup and recovery, performance management and storage management for z/VM and Linux on System z environments. In addition to delivering excellent technical and customer support worldwide, CA Technologies continues to have a strong commitment to supporting its z/VM and Linux on System z solutions and will continue to maintain its leadership role by developing and enhancing these solutions, exploiting new technology and responding to customer needs and requirements.